Creighton University
College of Arts & Sciences

14th Annual Honors Day

Program of Research Presentations

18 April 2018
2:00-5:00 pm
Harper Center, 3rd Floor

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Welcome from the Dean

Welcome to Honors Day 2018.

Today we recognize the innovation, creativity, and dedication of Creighton's College of Arts and Sciences Honors Program students. We celebrate the range of their academic accomplishments. These presentations and posters demonstrate the very best of what exceptional undergraduates can produce when provided with the combination of freedom of inquiry, disciplinary focus, and mentorship from faculty, all of which are key features of Creighton University's Honors Program. What you see displayed here in the Honors students' projects is a culmination of intellectual curiosity, diligent research, and steadfast commitment to creating new knowledge. I hope you will join me in congratulating the students and their mentors. We are proud of your contributions to Creighton and to your fields. We honor you.

Congratulations, Honors Day 2018 presenters!

Dr. Bridget Keegan, Ph.D.
Professor of English and Dean,
College of Arts and Sciences

Welcome from the Director

Dear Honors Researchers,

Today, as we do every year, we gather to celebrate Honors research projects. These projects represent disciplines across our curriculum, treating such diverse topics as the explanatory power of historical fiction, impulsivity and drug abuse, and intercultural communication with refugees. Like all the best research, your work contributes not only to our understanding of the world, but likewise to our admiration and wonder.

The ambitious projects you are presenting today were born not just of your intellectual powers, but of your diligence, patience, courage, and steadfastness. It was hope that inspired you, resolve that carried you through, and conscientiousness that led to completion. Not only your projects, but you yourselves serve as models for the Creighton community to follow. Therefore, we gather to celebrate not just Honors research, but Honors researchers.

Congratulations on your hard-won accomplishments.

Dr. Jeffrey Hause, Ph.D.
Honors Program Director

Oral Presentation Schedule

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2:05 pm	3029	Grace Spiewak	"Rape Scenes in Ovid's *Metamorphoses* Through a Modern Lens"
2:30 pm	3027	Nathan Chaplin	"Race, Reconcentration, and the Spanish-American War"
2:30 pm	3027A	Calvin Fairbourn	"Determining the Method of Nematode Infection and Charting its Progress"
2:30 pm	3029	Tyler Nelson	"Getting Them Wrong: Narrative and Identity in Philip Roth's *The Human Stain*"
2:55 pm	3027	Skylar Devins	"I See That Fable Differently"
2:55 pm	3027A	Erik Sheagren	"The Unique Insolubility of Belief as an Adaptive Advantage"
2:55 pm	3029	Daniel Zimmer	"Am I My Brother's Keeper? Ancient Perspectives on Fraternal Correction"
3:20 pm	3027	Hannah Pulverenti	"The Power of Written Word in Ancient Dream Interpretation"

Time:	Room:	Presenter:	Title:
3:20 pm	3027A	Abigail Laudi	"The Barriers and Facilitators of HIV Screening and Services in Rural Uganda: A Collective Case Study"
3:20 pm	3029	Kate Albrecht	"We had Everything but Money: The Future of Digital Preservation"
3:45 pm	3027A	Brett Marek	"The Effect of Compulsory Education on Urbanization"
3:45 pm	3029	Zach Wulbert	"Ecumenism in Church Social Teaching"

Poster Presentation Schedule

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2:05 pm	3023B	Carla Barrera	"Disease Associated Prion Protein Accumulation in Cells of the Carotid Body, Autonomic Ganglia, and Lymph Nodes of Infected Hamsters"
2:05 pm	3023B	Michael Barry	"Mate Preference of the Horsehair Worm, *Paragordius varius* (Nematomorpha)"
2:05 pm	3023B	Ellen Townley	"Immunotherapy Resistance Mechanisms in Glioblastoma Mouse Models"
2:05 pm	3023B	Rachel Busselman	"Rat Intravenous Self-Administration of Cocaine on an IRT>t Schedule"
2:05 pm	3023B	Patrick Marta	"The Role of Homocysteine and Hydrogen Sulfide in HL1 Cardiomyocyte Death Signaling"
2:05 pm	3028	Brandon Crawford	"Adoption of Renewable Portfolio Standards by State Governments: The Role of Geographic Determinants"
2:05 pm	3028	Melissa Le	"Visualizing Yelp's Dataset"

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2:05 pm	3028	Craig Schmerbauch	"The Effect of Salary Cap Strategy in the NHL"
2:05 pm	3028	Luke Hallman	"Use of MCM-41 Loaded Tetracycline for the Treatment of Escherichia coli"
2:05 pm	3028	Bailey Hassman	"Behavioral Tests for Assessing Learning in *Xenopus tropicalis*"
2:05 pm	3028	Nick Kreofsky	"Addition of Biphenyl Substituents to Triazolium Salts Increases Antimicrobial Potency"
2:55 pm	3023B	Nancy He	"Racial Bias in Pain Perception in Undergraduate and Graduate Students"
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2:55 pm	3023B	Mikayla Kaufenberg	"The Effect of Resistance Training on Contractile Force Production During Doxorubicin Treatment"
2:55 pm	3023B	Nick Kuttner	"Evidence that Ethanol Exposure Disrupts Lipophagy"

Time:	Room:	Presenter:	Title:
2:55 pm	3023B	Sai Sujana Maddipati	"Work Towards Development of a Microfluidic Glucose Biosensor with Electrochemiluminescent Detection"
2:55 pm	3023B	Willie Shearon	"Immune Priming: Assessing the Immunological Memory in *Gryllus firmus*"
2:55 pm	3028	Steven Malouff	"Temporal Distribution of Responses on Fixed- and Variable-Interval Reinforcement Schedules"
2:55 pm	3028	Kathleen Marinelli	"Stenosis and Pseudostenosis of the Upper Extremity Arteries on Magnetic Resonance Angiography in Large Vessel Vasculitis"
2:55pm	3028	Ashley Monaco	"Effect of HIV pre-exposure prophylaxis on Jurkat and H9 T-cells"
2:55 pm	3028	Hadi Berbari	"Restoring PKD1 Gene Dosage in ADPKD using CRISPR-on"
2:55 pm	3028	Nicholas Austin Jantrakul	"Work Towards an Electrogenerated Chemiluminescence-DNA Biosensor Labeled with a Ruthenium Complex"
2:55 pm	3028	Sindhuja Suresh	"Microgravity as an Immunomodulatory Tool for Drug Assessment"

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2:55 pm	3028	Shannon Toalson	"Attention Training Exerts Therapeutic Effects on PTSD Symptoms in Only Four Sessions"
3:45 pm	3023B	Danielle Pham	"Vanishing Dissipation Limits for a Lagrangian-Averaged Magnetohydrodynamic Equation"
3:45 pm	3023B	Colin Reedy	"Syntheses and Crystal Structures of Lanthanide Periodates"
3:45 pm	3023B	Lauren Richards	"The Effects of Foreleg Loss on Locomotor Performance on the Darkling Beetle *Zophobas morio*"
3:45 pm	3023B	Ryan Sabotin	"Vitellogenin Expression in Honey Bees (*Apis mellifera*): How Viral Infections Influence Honey Bee Physiology"
3:45 pm	3023B	Kevin Brittan	"Differentiating NADH and NADPH With Fluorescent Lifetime Imaging"
3:45 pm	3023B	Sam Shea	"Caspase-3 Expression in Epithelial Cells in the Nasal Cavity of Hamsters"

Time:	Room:	Presenter:	Title:
3:45 pm	3028	Robert Tennermann	"A Modern Helen of Troy: The Zimmerman Telegram and its Impact on World War I"
3:45 pm	3028	Emily Stoll	"Culture of Communication: Analyzing Intercultural Communication with Resettled Refugees in Primary Health Care"
3:45 pm	3028	Kara Wolters	"Implicit and Explicit Disability Prejudice Among College Students"
3:45 pm	3028	Lauren Strzelecki	"The Effects of Maltreatment and PTSD on Emotion Recognition in Children"
3:45 pm	3028	Erica Greeman	"The Regulation of Banking Industries"
3:45 pm	3028	Chris Meehan	"Using Satellite Imagery to Detect Effects of Climate Variation on Landscapes in the Nebraska Sandhills"
3:45 pm	3028	Samantha Stoupa	"Identification of Allosteric Twister Ribozyme for Use as a Synthetic Genetic Switch"

Schedule of Speakers

Welcome and Introduction 2:00 pm, 3023
Dr. Erin Walcek Averett
Associate Director of the Honors Program

Closing Ceremony
Introduction to the Dean 4:30 pm, 3023
Dr. Erin Walcek Averett
Associate Director of the Honors Program

Congratulations from the Dean 4:35 pm, 3023
Dr. Bridget Keegan
Dean of the College of Arts and Sciences

Congratulations from the Provost 4:45 pm, 3023
Dr. Thomas F. Murray
Provost of Creighton University

Congratulations from the President 4:55 pm, 3023
Rev. Daniel S. Hendrickson, S.J.
President of Creighton University

Closing Remarks 5:00 pm, 3023
Dr. Jeffrey Hause
Director of the Honors Program

Abstracts

alphabetical by last name

Kate Albrecht

Major: English
Faculty Sponsor: Dr. Simon Appleford
3:20 pm | Harper 3029

"We had Everything but Money: The Future of Digital Preservation"

Digital Autobiographies: the Future of Preservation explores various ways of digitally preserving a previously unknown autobiography, *We Had Everything but Money*. In this work, Helen Lenninger Richard details life in rural Kansas during the Dust Bowl, Great Depression, and World War II. This project not only presents her work in digitally accessible formats to future scholarly researchers, but also critically analyzes the role of trauma in her writings. The way Richard writes about trauma juxtaposes extraordinary events with ordinary routines, highlighting a coping mechanism for trauma survivors.

Carla Barrera

Majors: Neuroscience, Biology
Faculty Sponsor: Dr. Anthony Kincaid
2:05 pm | Harper 3023B

"Disease Associated Prion Protein Accumulation in Cells of the Carotid Body, Autonomic Ganglia, and Lymph Nodes of Infected Hamsters"

Misfolded prion proteins are responsible for chronic wasting disease in deer and Creutzfeldt-Jakob disease in humans. However, it is not known how infectious prions spread from the blood into the central nervous system. We hypothesize that cells in the carotid body play a role in prion neuroinvasion. Carotid bodies are collections of chemoreceptor cells that detect oxygen, pH and carbon dioxide levels in blood. Based on our experimentation, misfolded prion protein was detected in carotid body cells, lymph nodes, and ganglia of animals inoculated either intraperitoneally or intracerebrally with HY strain but was not located in the carotid bodies of uninfected or other infected animals. Carotid body cells may play a role in neuroinvasion, but only for certain prion strains, such as HY.

Michael Barry

Major: Biology
Faculty Sponsor: Fr. John Shea, S.J.
2:05 pm | Harper 3023B

"Mate Preference of the Horsehair Worm, *Paragordius varius* (Nematomorpha)"

The Horsehair worm (*Paragordius varius*) is a parasitic worm that serves as an excellent model system to study parasitic adult mating strategies, which could lead to advancements in medical treatments for closely related nematodes who utilize human hosts. In this study, we examined the mating preference of both males and females using several sets of dichotomous mate choice trials. Trials consisted of a central focal worm being released midway between two stimulus worms and position within the tank was recorded over a 15-minute period. Results showed that 14 female focal worms exhibited statistically insignificant preference ($p=0.69$) for male or female stimulus worms, but 12 males did show a significant preference ($p=0.029$) for the female stimulus worms.

Hadi Berbari

Major: Biology
Faculty Sponsor: Dr. Charles Brockhouse
2:55 pm | Harper 3028

"Restoring PKD1 Gene Dosage in ADPKD using CRISPR-on"

Autosomal dominant polycystic kidney disease (ADPKD) is an inherited disease that is characterized by the accumulation of non-malignant, fluid filled cysts in the kidneys. In patients with ADPKD, there is a mutant allele in the PKD1 gene which causes haploinsufficiency due to reduced production of its protein product polycystin-1. While "classical" gene therapy with a wild-type copy of ADPKD could be performed, the PKD1 cDNA is three times too large for the popular adeno associative virus (AAV) vectors. To circumvent this problem, we intend to deliver the smaller CRISPR-on system which does not utilize PKD1 cDNA in order to increase PKD1 expression from the remaining wild-type allele. The deactivated Cas9 protein is fused to a transcriptional activator. This system allows targeted delivery of transcriptional activators to up-regulate expression at a specific genomic locus.

Kevin Brittan

Major: Neuroscience
Faculty Sponsor: Dr. Michael Nichols
3:45 pm | Harper 3023B

"Differentiating NADH and NADPH with Fluorescent Lifetime Imaging"

Cancer is known to cause altered metabolic states resulting in shifts in NADH concentration and binding characteristics which can be studied using Fluorescent Lifetime Imaging (FLIM). However, FLIM is unable to distinguish nicotinamide adenine dinucleotide phosphate (NADPH) and NADH given the identical lifetimes and fluorescence wavelengths. This study aims to differentiate between the two through inhibition of cellular metabolism functions. We accomplished this by treating our cells with rotenone and carbonyl cyanide p-trifluoromethoxyphenylhydrazone (FCCP) to increase and decrease NADH levels respectively; and using glucose-6-phosphate dehydrogenase (G6PD) and glutathione reductase (GR) to protonate and deprotonate NADPH in the cell respectively.

Rachel Busselman

Major: Biology
Faculty Sponsor: Dr. Dustin Stairs
2:05 pm | Harper 3023B

"Rat Intravenous Self-Administration of Cocaine on an IRT>t Schedule"

Impulsivity has been associated with vulnerability to drug abuse. While previous studies indicate a relationship between impulsivity and drug exposure, there is limited data on whether behavioral inhibition on a DRL (differential reinforcement of low-rates) schedule is affected when the reinforcer is the drug of abuse. The purpose of this study is to develop an animal model in rats where cocaine drug self-administration can be established using a DRL schedule. Once completed, I should be able to ascertain whether cocaine can be self-administered on a DRL schedule, allowing this schedule to be used to test impulsivity with the drug of abuse as the reinforcer.

Christopher Ceresa

Major: Chemistry
Faculty Sponsor: Dr. Leonard Greenspoon
2:05 pm | Harper 3027

"History or Fiction: A Reflection on the Use of Historical Fiction as an Effective Tool for Analyzing the Past"

Sifting through historical documents can be a dull process! Through a creative lens such as historical fiction, that process is seen in a new light. Through consultation with experts across multiple disciplines, I view this project as an attempt to assess the efficacy of the historical fiction writing process as an educational method as well as to investigate the role of medical practitioners in the late Roman Empire. The findings of this assessment were reflected upon through qualitative assessment and presentation to student focus groups, suggesting that historical fiction can be a means for legitimate inquiry into the past.

Nathan Chaplin

Majors: History, Theology
Faculty Sponsor: Dr. Scott Eastman
2:30 pm | Harper 3027

"Race, Reconstruction, and the Spanish-American War"

During the Spanish-American War, race played a substantial role in motivating the American people towards interventionalism. The American media portrayed Cubans as an oppressed people, similar to the colonists during the Revolutionary War. But they were also described as simple and lazy, and incapable of freeing themselves. The Spanish were seen as brutal uncivilized savages, who had destroyed the island of Cuba with their policy of reconcentration. Senator Jacob Gallinger, General Fitzhugh Lee, and Charles Pepper all outlined these racial views in their writings. In summation, race was crucial in provoking the American war movement.

Brandon Crawford

Majors: Political Science, English
Faculty Sponsor: Dr. Richard Witmer
2:05 pm | Harper 3028

"Adoption of Renewable Portfolio Standards by State Governments: The Role of Geographic Determinants"

The variance in adoption of Renewable Portfolio Standards (RPSs) by state governments has been a source of continuous academic interest. The majority of past research focuses on economic incentives, political and ideological identifications, and policy diffusion between neighbors. These studies have largely forgone looking at geographic factors that may have an impact on policy adoption. This study seeks to remedy this shortfall and determine the importance of coastline and pro-environment identification on the likelihood of RPS adoption at the state level. My findings suggest that although geographic determinants exhibit no statistical significance, ideological factors are reliable predictors of RPS adoption across the board.

Skylar Devins

Majors: Biology, Studio Art
Faculty Sponsor: Fr. Gregory Carlson, S.J.
2:55 pm | Harper 3027

"I See That Fable Differently"

"I See that Fable Differently" features various interpretations of Aesop's classic fables. Ancient Greek fables attributed to Aesop have taught morals to adults and children for centuries. Artists and writers will twist the classic fables to change their morals. The Carlson fable collection contains many of these books and artworks that reinterpret, or misinterpret, the original stories. A team of Creighton students was tasked with the duty of curating a show from the collection for the Joslyn. This presentation will highlight the process of finding the appropriate works for the event.

Matthew Dovgan

Major: Exercise Science and Pre-Health Professions
Faculty Sponsor: Dr. Eric Bredahl
2:55 pm | Harper 3023B

"The Effect of Creatine and Creatinine on Rates of Necrosis in Doxorubicin Treated Myoblasts"

Doxorubicin (DOX) is a powerful chemotherapy agent that is associated with a number of deleterious side effects, including skeletal muscle atrophy. The adverse effects of DOX on skeletal muscle may be attributed to the generation of reactive oxygen species (ROS), which ultimately results in cell death. Conversely, creatine (Cr) supplementation has been shown to minimize ROS generation, a hallmark of DOX treatment. This study was designed to assess the ability of supplementation with Cr or creatinine (CrN) to minimize rates of apoptosis and necrosis in DOX-treated skeletal muscle myoblasts. Our findings demonstrated that Cr and CrN had a cytoprotective effect on DOX treated myoblasts.

Calvin Fairbourn

Majors: Biology, Medical Anthropology
Faculty Sponsor: Fr. John Shea, S.J.
2:30 pm | Harper 3027A

"Determining the Method of Nematode Infection and Charting its Progress"

While the end results of nematode infections in invertebrates are well documented, the actual anatomical and physiological initiation and progression of an infection are not definitely established. We observed the initial infection of crickets with nematodes and then charted the nematodes' progress and growth over the course of the infection to elucidate the anatomical and physiological changes that occur to both the parasite and its host.

Anthony Giguere

Major: Emergency Medical Services
Faculty Sponsor: Dr. William Leggio
2:05 pm | Harper 3028

"Patients of Low Socio-Economic Experience with Ambulance Providers"

Our research has and will continue to involve collection of qualitative data from persons of low socio-economic status through the Siena-Francis House pertaining to their experiences with ambulance providers. Since ambulance providers interact with this population frequently, it is potentially very helpful to learn how those individuals see ambulance providers and their experience with them. We are recording interviews with people at the Siena-Francis House, and then transcribing and compiling the interviews so we can identify trends in their experiences. This research will help make the voices of the population we are studying heard pertaining to ambulance-based healthcare.

Erica Greeman

Majors: Economics, French
Faculty Sponsor: Dr. David Vanderboegh
3:45 pm | Harper 3028

"Regulation of Banking Industries"

Bank regulation is essential in every country that has a financial system that depends upon indirect finance. In this research the regulation in the United States will be compared to that of France. In addition, the regulation of the European Central Bank over French banks will be considered. The reactions the regulatory agencies in each of these countries have to financial and banking crises will be compared to provide a clear picture of how the actions of the regulatory agencies have helped or hindered each country's overall economy.

Luke Hallman

Major: Biochemistry
Faculty Sponsor: Dr. Michael Miller
2:05 pm | Harper 3028

"Use of MCM-41 loaded tetracycline for the treatment of Escherichia coli"

Tetracycline is an antibiotic drug useful against a large array of bacteria including Escherichia coli, the common facultative bacteria in the human gut. The activity of tetracycline has been shown to be enhanced when loaded onto MCM-41, a mesoporous silica nanoparticle. The mechanism for this increase in activity remains unknown. The current project seeks to determine this mechanism by optimizing previous results and then determining the effects of tetracycline loaded MCM-41 particles on tetracycline resistant (efflux) E. coli. Results support previous experiments, while improving upon reproducibility. Continuing research will determine the mechanism of action for tetracycline loaded MCM-41.

Bailey Hassman

Majors: Neuroscience, Biology
Faculty Sponsor: Dr. Laura Bruce
2:05 pm | Harper 3028

"Behavioral Tests for Assessing Learning in *Xenopus tropicalis*"

Learning to respond to particular stimuli with appropriate fear reactions is so crucial to survival that the brain areas controlling fear probably appeared very early in evolution. The goal of this research project is to establish three behavioral tasks to assess fear behavior in *Xenopus tropicalis* tadpoles as a basis for future studies of the roles of various genes in regulating fear behaviors. Our protocols measured (1) chronic anxiety levels using a stationary field and a moving stimulus, (2) avoidance conditioning to test combined hippocampal and amygdalar learning, and (3) cued fear conditioning and extinction to test amygdalar memory.

Nancy He

Major: Psychology
Faculty Sponsor: Dr. Thomas Lee Budesheim, Dr. Jill Brown
2:55 pm | Harper 3023B

"Racial Bias in Pain Perception in Undergraduate and Graduate Students"

There are significant racial disparities in the pain diagnosis and treatment in the field of healthcare. For example, studies have shown that clinicians and non-clinicians view African Americans as more pain tolerant and suggest less treatment in comparison to white individuals. The current study aims to investigate undergraduate and graduate students' beliefs about differences in pain depending on ethnic identity. Students will complete a survey regarding their beliefs about the biological differences in pain of different racial groups and evaluate a clinical case study. This study will help identify students' preconceived beliefs about pain differences depending on racial identity.

Nicholas Austin Jantrakul

Major: Biochemistry
Faculty Sponsor: Dr. Erin Gross
2:55 pm | Harper 3028

"Work Towards an Electrogenerated Chemiluminescence-DNA Biosensor Labeled with a Ruthenium Complex"

This project focuses on using highly selective electrogenerated chemiluminescence (ECL) biosensor for the detection of target single-strand DNA (ssDNA) developed using hairpin DNA as the recognition element and ruthenium complex as the signal-producing compound. The hairpin either produces an on or off signal through the fluorescence of a ruthenium complex, which is detectable by a photomultiplier tube (PMT). The project provides proof that this biosensor concept is a practical method for the detection of ssDNA sequences. Currently we are attempting to test the concept with no target, a mismatched target, and a correct target to display the biosensors' interactions.

Mikayla Kaufenberg

Majors: Exercise Science and Pre-Health Professions
Faculty Sponsor: Dr. Eric Bredahl
2:55 pm | Harper 3023B

"The Effect Of Resistance Training on Contractile Force Production During Doxorubicin Treatment"

Doxorubicin (DOX) is a powerful chemotherapy agent associated with several harmful side effects including cardiovascular and skeletal muscle dysfunction. However, few studies have examined the effect of resistance training (RT) during treatment. Thus, this work aimed to investigate the ability of RT to minimize DOX-induced muscle dysfunction during DOX treatment using a rat model. Experimental animals simultaneously performed RT while receiving DOX. At the end of the trial, ex vivo muscle analysis was performed and contractile forces were assessed. We found significantly altered contractile mechanics in the non-exercise chemotherapy animals; however, this decline was attenuated with RT. It appears that RT during treatment is effective in mitigating the effects of DOX-induced muscle dysfunction.

Nick Kreofsky

Major: Biochemistry
Faculty Sponsor: Dr. James Fletcher
2:05 pm | Harper 3028

"Addition of Biphenyl Substituents to Triazolium Salts Increases Antimicrobial Potency"

Antibiotic resistant bacteria are a growing concern in the world. Therefore, research on novel antimicrobial compounds that kill in ways that traditional antibiotics do not is especially important. It has been discovered that certain triazolium salts are lethal to bacteria and fungi. We studied how the addition of different aromatic groups to the triazole would affect its potency. We synthesized the products through simple addition reactions, checked the purity using proton NMR, then ran bacterial assays to assess their potency. We learned that the addition of biphenyl substituents to the triazolium salts created the most effective antimicrobial compounds.

Nick Kuttner

Major: Biology
Faculty Sponsor: Dr. Alistair Cullum
2:55 pm | Harper 3023B

"Evidence that Ethanol Exposure Disrupts Lipophagy"

Alcohol (ethanol) is metabolized principally in the liver by the enzymes alcohol dehydrogenase (ADH), and cytochrome P450 2E1 (CYP2E1). Both reactions generate acetaldehyde, which is highly toxic. Our principal focus was to determine whether chronic ethanol consumption by rodents alters the rate of autophagy, particularly a specific form called lipophagy, during which lipid droplets are broken down in lysosomes. To investigate this, we used isolated hepatocytes from control and ethanol-fed rats and cultured cells that metabolize ethanol. Our findings indicate that continuous ethanol consumption inhibits autophagy/lipophagy and that lipid accumulation in the liver partially results from this slowdown.

Abigail Laudi

Major: Psychology
Faculty Sponsor: Dr. Corey Guenther
3:20 pm | Harper 3027A

"The Barriers and Facilitators of HIV Screening and Services in Rural Uganda: A Collective Case Study"

Currently, approximately 90,000 people live with HIV/AIDS in Uganda (UNAIDS, 2016). Summaries of Uganda's barriers to HIV services from international organizations such as UNAIDS or Uganda's Ministry of Health illustrate that the intent for eradication is present, yet their literature lacks information on local facilitators and barriers to accomplish these goals. This research planned to better define the HIV epidemiology in three Ugandan districts. Qualitative semi-structured interviews with 16 providers in Kabale, Kampala, and Lira took place over a four-week period. Among other findings, analyses revealed eight perceived facilitators and barriers that impact local Ugandan efforts in fighting the HIV/AIDS epidemic. These results provide a local-level analysis of challenges rural Ugandan health care providers face while addressing HIV in their communities.

Melissa Le

Majors: Computer Science, Graphic Design
Faculty Sponsor: Dr. David Reed
2:05 pm | Harper 3028

"Visualizing Yelp's Dataset"

Yelp is a social networking site that allows consumers to share their experiences with various businesses locally and internationally. Since their 2004 inception, the company has collected large amounts of business, review, and user data. What is problematic with large datasets, like Yelp's, is that it is difficult to grasp the patterns and trends present unless it is placed in a visual context. This project aims to explore, analyze, and visualize Yelp's dataset using R and other software programs to understand the relationship between businesses and user reviews.

Sai Sujana Maddipati

Major: Biology
Faculty Sponsor: Dr. Erin Gross
2:55 pm | Harper 3023B

"Work Towards Development of a Microfluidic Glucose Biosensor with Electrochemiluminescent Detection"

Most electrochemiluminescent (ECL) reactions are oxidation-reduction processes. This study focused on the light emitting oxidation reaction between luminol (5-amino-2,3-dihydrophthalazine-1,4-dione) and hydrogen peroxide (H2O2). This research involved optimizing the applied potential, luminol concentration, and H2O2 concentration to maximize the detection of light. The optimal potential was 1.1 V. The optimal luminol concentration was 400 μM. The data for optimal H2O2 concentration detection fluctuated and made it difficult to determine the optimal range. Luminol-based ECL reactions are well suited for the detection of biological analytes. Future studies will apply the optimal concentrations for maximum detection of light to develop a glucose biosensor.

Steven Malouff

Major: Neuroscience
Faculty Sponsor: Dr. James Lupo†
2:55 pm | Harper 3028

"Temporal Distribution of Responses on Fixed- and Variable-Interval Reinforcement Schedules"

Participants of this project utilized a mouse cursor to locate a hidden colored square within a 3x3 grid of black squares presented on a computer monitor. Reinforcement was provided on a progressive fixed interval (FI) schedule for some participants and on a progressive variable interval (VI) schedule for others. The temporal distribution of responses during the final phase of testing was examined for evidence of a "scalloping" pattern that has been demonstrated using animal subjects in similar studies. Evidence for scalloping was found in study one but not study two. Implications regarding the General Process model of learning are discussed.

Brett Marek

Major: Economics
Faculty Sponsor: Dr. Kristie Briggs
3:45 pm | Harper 3027A

"The Effect of Compulsory Education on Urbanization"

Urbanization has been a significant demographic shift in recent history and represents a departure from how the majority of the world's population has lived for thousands of years. I hypothesize that increases in the number of years of compulsory education in countries will lead to increases in a country's urban population as a percentage of its total population. I use a variety of econometric methods to show that compulsory education does have a statistically significant impact on urbanization. This significant causal relationship indicates that governments should take education into account when preparing for urbanization and the demands of growing cities.

Kathleen Marinelli

Major: Biology
Faculty Sponsor: Dr. Mark Reedy
2:55 pm | Harper 3028

"Stenosis and Pseudostenosis of the Upper Extremity Arteries on Magnetic Resonance Angiography in Large Vessel Vasculitis"

Pseudostenosis is an angiographic artifact that mimics an arterial stenosis. The objective of this study was to characterize pseudostenosis and stenosis in a cohort of large vessel vasculitis (LVV) patients since treatment changes can rely solely on angiographic progression. Patients with LVV and comparator conditions underwent serial magnetic resonance angiography (MRA) of the aortic arch vessels. Morphologic characteristics of pseudostenoses were compared to arterial stenoses and associated clinical vascular examination. 147 MRA scans were analyzed. Pseudostenoses were prevalent (37/147, 25%) in the distal subclavian artery on the side of injection and were shorter in length than true stenoses (25mm vs 74mm, $p<0.01$). Identification of characteristic morphological differences between pseudostenoses and true stenoses is important in preventing the labelling of susceptibility artifacts as true disease.

Patrick Marta

Majors: Neuroscience, Biology, Neuropsychology
Faculty Sponsor: Dr. Shashank Dravid
2:05 pm | Harper 3023B

"The Role of Homocysteine and Hydrogen Sulfide in HL1 Cardiomyocyte Death Signaling"

Hydrogen sulfide replenishment treatment has shown to be cardioprotective in hyperhomocysteinemeic conditions, so mechanistic exploration may uncover information about this hydrogen sulfide-homocysteine relationship. We subjected HL1 cardiomyocytes to hyperhomocysteinemic conditions for 24 hours, and provided treatment with slow or fast-releasing H2S donors. We used Western Blotting and Immunofluorescence to probe for markers of apoptosis, pyroptosis, and necroptosis. A 48-hour treatment followed by a TUNEL Assay revealed rate of cell death among each treatment group. The fast releasing H2S donor demonstrated the mitigation of apoptosis in both control and hyperhomocysteinemic conditions.

Chris Meehan

Majors: Biology, Environmental Science
Faculty Sponsor: Dr. Mary Ann Vinton
3:45 pm | Harper 3028

"Using Satellite Imagery to Detect Effects of Climate Variation on Landscapes in the Nebraska Sandhills"

The Sandhills region of Nebraska contains one of the largest, unfragmented grassland habitats in North America. Portions of the Sandhills have been designated as "biologically unique landscapes" (BULs). We began a study of biodiversity and landscape change in the Dismal River Headwaters BUL region in summer 2017 using field surveys and satellite imagery of landscape change over the past 31 years. Currently, our results are important in assessing the degree to which the Nebraska Sandhills contribute to conservation of biodiversity and ecosystem function in native grasslands, as well as assessing the current impact of climate change.

Ashley Monaco

Major: Neuroscience
Faculty Sponsor: Dr. Annemarie Shibata
2:55 pm | Harper 3028

"Effect of HIV Pre-exposure Prophylaxis on Jurkat and H9 T-cells"

Viral entry inhibitors that block HIV's access to T cells and antiretroviral drugs that act prior to integration of HIV with human DNA are currently being studied for pre-exposure prophylaxis (PrEP). Dolutegravir (DTG) combined with Poly-(lactic-co-glycolic acid) (PLGA) in nanoparticle formulations may improve HIV PrEP. Cytoskeletal rearrangement is fundamental for normal immune responses of T cells. To determine whether T cells experience significant changes in cytoskeletal properties and protein expression following exposure to DTG and DTG-PLGA nanoparticles, we used a microfluidic microcirculation mimetic (MMM) platform and biochemical assays. MMM is used to mimic the capillary constriction of both the pulmonary and peripheral microcirculation to allow us to determine whether in vivo-like mechanical stimuli cause different responses in H9 T-cells when exposed to DTG and DTG-PLGA nanoparticles. Biochemical assays evaluate protein expression and the effect of DTG and DTG-PLGA nanoparticles on T cell differentiation and activation.

Tyler Nelson

Major: English
Faculty Sponsor: Dr. Lydia Cooper
2:30 pm | Harper 3029

"Getting Them Wrong: Narrative and Identity in Philip Roth's *The Human Stain*"

Philip Roth is one of America's foremost living authors, having won nearly every major literary award during his long career. Of particular note is his novel *The Human Stain*, in which Roth's alter-ego, Nathan Zuckerman, narrates the biography of another man, Coleman Silk, based on secondhand stories and his own speculations. The novel is centered around novelistic characterization, how an author creates and portrays identity. Extending this creative act outside the realm of literature suggests Roth's fiction argues for the non-existence of a true self, that every presentation of identity is blurred between observed fact and speculative fiction.

Olufemi Oladokun

Major: Biology
Faculty Sponsor: Dr. Michael Nichols
2:05 pm | Harper 3023B

"Biomechanical Assessment of Metastatic Effects of Cancer Drugs Using an Optical Stretcher"

Secondary tumors form when cancer cells leave their primary locations and enter the blood stream by squeezing through spaces within the capillary wall, which requires significant deformation. Post cancer treatment, surviving cells are capable of undergoing this process, termed metastasis, and cause further complications. In order to analyze the effects of such treatments on the elasticity of the cell, we use an optical stretcher to generate a relationship between optical pressure and cell deformation, thus calculating the elastic modulus. We use lymphoma (HL60 and K562) cells for our analysis and we will be testing the effects of daunorubicin and doxorubicin, two mainline cancer drugs being used today.

Danielle Pham

Major: Mathematics
Faculty Sponsor: Dr. Nathan Pennington
3:45 pm | Harper 3023B

"Vanishing Dissipation Limits for a Lagrangian-Averaged Magnetohydrodynamic Equation"

The Magnetohydrodynamic (MHD) equation governs kinematic fluids subjected to magnetic fields. The equation combines Navier-Stokes and Maxwell's equations. Due to its difficulty, it is common to study approximating versions of the equation, including the MHD-α system, which regularizes the velocity field in exchange for non-linear terms. Both kinematic and magnetic parts of the MHD-α system have diffusive terms which dissipate the initial energy of the system. Setting those terms equal to zero returns the Ideal MHD-α system. We will show that solutions to the MHD-α system with diffusion converge to the Ideal MHD-α system as diffusion parameters are sent to zero.

Hannah Pulverenti

Major: Classical Languages
Faculty Sponsor: Dr. Jeffrey Hause
3:20 pm | Harper 3027

"The Power of the Written Word in Ancient Dream Interpretation"

Oneirocriticism, or interpreting dreams, comprises a significant portion of ancient magical literature. Manuals for dream interpretation are not only literary works, but they also provide an insight into how some civilizations viewed the power of written language. In particular, puns are prevalent in oneirocriticism across a number of ancient Mediterranean cultures. While modern attitudes towards punning are light-hearted, in antiquity puns were no laughing manner. Puns held immense power, and putting them into writing was a serious decision.

Colin Reedy

Majors: Chemistry, Physics
Faculty Sponsor: Dr. Eric Villa
3:45 pm | Harper 3023B

"Syntheses and Crystal Structures of Lanthanide Periodates"

Lanthanides are found in all types of technology. Their unique magnetic and luminescent characteristics make them useful in devices ranging from television to bioanalytical systems. When combined with periodate, there is the potential to make interesting crystal structures. Thus far, only one lanthanide periodate structure type is known. Moreover, in-situ reduction reactions that yield iodate have the potential to yield new, interesting structure types. Lanthanide iodates have been extensively explored for their unique properties, primarily second harmonic generation. While these are relatively well documented, the properties of periodates are not due to there being so few examples of these materials. However, one know property of periodates is that they are versatile chelating ligands. Herein, we explore the hydrothermal reactions between lanthanide cations and the periodate anion.

Lauren Richards

Majors: Biology, Spanish and Hispanic Studies
Faculty Sponsor: Dr. Gabriel Rivera
3:45 pm | Harper 3023B

"The Effects of Foreleg Loss on Locomotor Performance in the Darkling Beetle *Zophobas morio*"

Limbed locomotion requires the coordinated movement of limbs to produce maximal performance, but what are the consequences of limb loss on locomotor strategy and efficiency? Quadrupedal animals that lose a limb must alter their kinematic patterns to maintain the ability to locomote. While animals with more limbs should be less severely impacted by the loss of a single limb, their locomotor performance may similarly be enhanced by modulation of kinematic patterns. Do animals always modulate kinematic patterns? Will animals in similar situations converge on a single, optimal answer? To address these questions, we examined the effects of foreleg loss on locomotor performance in the darkling beetle *Zophobas morio*.

Ryan Sabotin

Major: Neuroscience
Faculty Sponsor: Dr. Carol Fassbinder-Orth
3:45 pm | Harper 3023B

"Vitellogenin Expression in Honey Bees (*Apis mellifera*): How Viral Infections Influence Honey Bee Physiology"

Over the past several decades, honey bee (*Apis mellifera*) populations have been declining in a phenomenon known as Colony Collapse Disorder (CCD). The ectoparasitic mite, Varroa destructor, has been a large contributor to CCD, as it is known to transfer viruses between bees and colonies. Looking specifically at physiology, our project analyzed how a dicistrovirus affects the gene expression of vitellogenin. Analyzing viral load and gene expression, inoculated bees showed significantly lower vitellogenin expression with higher levels of viremia. These results uncover a potentially substantial physiological relationship that may inform us about some of the underlying mechanisms of CCD.

Craig Schmerbauch

Major: Economics
Faculty Sponsors: Dr. Kristie Briggs
2:05 pm | Harper 3028

"The Effect of Salary Cap Strategy in the NHL"

It is no secret that front office decisions have major on-field consequences for professional sports teams, but less clear are the particular effects varying salary cap strategies create throughout the course of a season and professional hockey is no exception. This project seeks to bring some clarity to this oft-discussed yet rarely analyzed question. Wage theory and tenets of developmental economics are used to set up a series of regression analyses of the effects of varying salary cap strategies on team success in the NHL through examination of salary cap expenditure, player wage inequality as measured by Gini coefficients, and playing time distributions.

Sam Shea

Major: Biology
Faculty Sponsor: Dr. Anthony Kincaid
3:45 pm | Harper 3023B

"Caspase-3 Expression in Epithelial Cells in the Nasal Cavity of Hamsters"

The nasal cavity (NC) is a complex structure lined by several types of epithelium. Epithelial tissues undergo regular turnover, which is generally mediated via apoptotic cascades leading to controlled cell death. The goal of this project was to identify spatial patterns of nasal epithelial turnover. The study employed hematoxylin and eosin staining, and immunohistological staining of caspase-3. A reference map was generated for four nasal cavities by scanning every fifth tissue section through the entire rostral-caudal extent of the NC. Apoptosis appears to be occurring at multiple sites at the same time in different areas of the hamster NC.

Erik Sheagren

Majors: Neuroscience, Philosophy
Faculty Sponsor: Dr. Theodore Burk
2:55 pm | Harper 3027A

"The Unique Insolubility of Belief as an Adaptive Advantage"

It is well established that all physical and behavioral characteristics in all organisms are subject to selection. In socially complex animals, evolutionary selection on behavioral characteristics is especially interesting both because of its speed and because characteristics can be transmitted between non-mating populations. This phenomenon is important because it represents a new, quickened paradigm in evolutionary history: namely, culture. Humans have gone a step further and learned to consciously adopt adaptive characteristics from unrelated populations for our benefit. In this talk, I argue that, though much of our behavioral architecture can be "democratized" in this way, there are exceptions, of which Belief is an interesting and important example.

Willie Shearon

Major: Biology
Faculty Sponsor: Dr. Amy Worthington
2:55 pm | Harper 3023B

"Immune Priming: Assessing the Immunological Memory in *Gryllus firmus*"

Although it was originally believed that invertebrates lacked the adaptive immunity characteristic of vertebrates, recent studies suggest that insects retain memory of their former pathogens. Using the sand cricket, Gryllus firmus, we measured the sequential immune response to homologous and heterologous immune challenges to experimentally test for immune priming. We used Serratia marcescens as the pathogen to test the bacterial immune response and a nylon monofilament as an analog for parasitic infection. If crickets exhibit immune priming, then crickets that received homologous challenges will present a stronger immune response upon the second infection relative to crickets that received heterologous challenges.

Grace Spiewak

Major: Classical Languages
Faculty Sponsor: Dr. Martha Habash
2:05 pm | Harper 3029

"Rape Scenes in Ovid's *Metamorphoses* Through a Modern Lens"

This research contains a textual analysis of selected scenes of rape and assault from Ovid's *Metamorphoses*. While Ovid remains a relevant subject among classical scholars, this research strives to advocate for the relevance and importance of reading the Metamorphoses with a modern lens. A linguistic evaluation of Creighton's Title IX legislation will serve as a contemporary example of language used in discussions of rape and assault. This project finds that Ovid's vocabulary and grammar can alter perceptions of the rapes he describes, thus illustrating the importance of linguistic choice in today's ongoing discussion and action regarding rape and assault.

Emily Stoll

Majors: Medical Anthropology, Spanish and Hispanic Studies
Faculty Sponsor: Dr. Laura Heinemann
3:45 pm | Harper 3028

"Culture of Communication: Analyzing Intercultural Communication with Resettled Refugees in Primary Health Care"

Refugees face many challenges in healthcare, including that of intercultural communication (IC). A total of 19 semi-structured qualitative interviews were conducted with healthcare personnel of a refugee-contracted primary care clinic in Omaha, NE to investigate the intersection between healthcare variables and barriers to IC. Systems Theory was used to map the various elements of IC within the primary care context, revealing important characteristics concerning the norms, roles, values, and processes that make up the structural environment of the clinic. Together, these elements were found to create a "culture of communication," in which IC was both valued and achieved.

Samantha Stoupa

Major: Biochemistry
Faculty Sponsor: Dr. Juliane Soukup
3:45 pm | Harper 3028

"Identification of an Allosteric Twister Ribozyme for Use as a Synthetic Genetic Switch"

Synthetic biology is a rapidly emerging field focused on engineering biochemical systems for a variety of applications. One tool that shows promise as a "device" for achieving synthetic gene regulation is a class of molecules called allosteric ribozymes. This project investigates whether mammalian gene expression can be controlled via allosteric ribozymes, namely, the Twister ribozyme. Previous results demonstrating the efficacy of Twister *in vivo* led us to investigate various synthesized Twister ribozymes *in vitro*. We designed Twister ribozyme constructs with the aim of making RNA self-cleavage dependent upon the small molecule theophylline and used *in vitro* selection (SELEX) to identify viable constructs. Results of this project may provide a foundation for the future use of allosteric ribozymes in modular systems to control mammalian gene expression.

Athena Strother

Major: Biology
Faculty Sponsor: Dr. Eric Haas
2:55 pm | Harper 3028

"Lipid Composition of Whole Squash Bugs Before and After Freezing"

The research project is comprised of two parts: lipid composition of squash bugs and how composition is affected by freezing temperatures. For the general lipid survey, we are interested in the lipid composition of the whole squash bug and how it's affected by infection. This research will allow for better control of the insect population and use of pesticides. For the lipid survey after freezing, squash bugs are used as surrogate insects to investigate ways in which we can ameliorate some of the effects of cryopreservation. Both parts involve the processes of extracting lipids, modifying lipids, and analysis through GC mass spec.

Lauren Strzelecki

Majors: Exercise Science and Pre-Health Professions
Faculty Sponsor: Dr. Maya Khanna, Dr. Stuart White
3:45 pm | Harper 3028

"The Effects of Maltreatment and PTSD on Emotion Recognition in Children"

Childhood maltreatment and PTSD are both associated with various negative outcomes as well as disruptions in recognizing emotions. While the two are related, it is unclear whether PTSD, maltreatment, or both are associated with emotion recognition problems. To investigate this, 99 children across a continuum of trauma exposure and PTSD symptoms completed an emotion recognition task. More maltreatment symptoms were correlated with poorer accuracy for recognizing fearful faces at high emotional intensities. These results suggest that childhood maltreatment is associated with emotion recognition disruption regardless of PTSD levels, which may be useful in further understanding how maltreatment affects emotion processing.

Sindhuja Suresh

Major: Computer Science
Faculty Sponsor: Dr. Andrew Ekpenyong
2:55 pm | Harper 3028

"Microgravity as an Immunomodulatory Tool for Drug Assessment"

Astronauts returning from space missions experience bone, muscular, and immune dysfunctions. On a cellular level, changes in gene expression and signaling pathways have been observed in astronauts as well as in simulated microgravity experiments conducted on earth. Using a NASA-designed Rotary Cell Culture System, we subject cells to simulated microgravity for 48 hours and then treat them with chemotherapy drugs. We use our Microfluidic Microcirculation Mimetic and migration assays to show that microgravity modulates cancer cell response to chemotherapy in a drug-dependent manner. This suggests using simulated microgravity as an immunomodulatory tool for the development of new therapies for terrestrial and space medicine.

Robert Tennermann

Major: German
Faculty Sponsor: Dr. Martha Habash
3:45 pm | Harper 3028

"A Modern Helen of Troy: The Zimmerman Telegram and its Impact on World War I"

Historians agree that the United States' involvement in World War I was unavoidable as hostilities continued to rage across Europe. However, the decision to join the war was undoubtedly quickened by the threat of invasion stemming from a German-Mexican wartime alliance. The discovery of the Zimmerman Telegram provided the United States the necessary motivation to join the war effort, but the long-standing repercussions of that decision remain in effect to this day. This project serves to analyze the consequences of this decision and the validity of the information intercepted within the telegram.

Shannon Toalson

Majors: Psychology, Biomedical Physics
Faculty Sponsor: Dr. Amy Badura-Brack
2:55 pm | Harper 3028

"Attention Training Exerts Therapeutic Effects on PTSD Symptoms in Only Four Sessions"

During a recent trial of attention control training versus attention bias modification for PTSD, we administered the PTSD Checklist three times: pre-treatment phone screen, after four sessions, and after eight sessions. Results indicated that both interventions significantly reduced PTSD severity, and that treatment effects were achieved after only four sessions.

Ellen Townley

Major: Biology
Faculty Sponsor: Dr. Gordon Freeman
2:05 pm | Harper 3023B

"Immunotherapy Resistance Mechanisms in Glioblastoma Mouse Models"

Cancer immunotherapies help the immune system recognize and eliminate tumors. Currently there are no effective immunotherapies for Glioblastoma (GBM), a common deadly brain tumor. The aim of this project is to identify mechanisms responsible for GBM resistance to immunotherapy. We compared GBM tumors grown from two types of cell cultures: neurosphere cells which are grown as free-floating cell clusters and adherent cells which are cells grown on a surface. We injected both cell types into mouse brains and characterized the resulting tumors. In the initial phase, we did not identify any differences between the two models that could be harnessed to make immunotherapy more effective. The experiment is ongoing.

Kara Wolters

Major: Psychology
Faculty Sponsor: Dr. Thomas Budesheim
3:45 pm | Harper 3028

"Implicit and Explicit Disability Prejudice Among College Students"

This research analyzes both the implicit and explicit prejudices held by college students toward people with intellectual and developmental disabilities (IDD). Using survey methodology, comparisons were made between the prejudices of average college students, those knowing someone with IDD, and those participating in the organization Best Buddies International. For the explicit measure of prejudice, adapted versions of the Attitudes Toward Disabled Persons Scale and the Contact with Disabled Persons Scale were used. An Implicit Association Test was created and used as the implicit measure of prejudice. Finally, participants answered various demographic questions.

Zach Wulbert

Majors: Theology, Secondary Education
Faculty Sponsor: Dr. Ashley Hall
3:45 pm | Harper 3029

"Ecumenism in Church Social Teaching"

Much progress has been made in ecumenical dialogue between Catholic and Protestant congregations in recent years, especially in the topics of Baptism, Eucharist, and Ministry. In the past 150 years, these Christian denominations have had to respond to the reality of the world around them, resulting in the development of their social teachings. Several common themes can be found throughout these documents, potentially making social teaching the next point of Christian ecumenical dialogue.

Daniel Zimmer

Majors: Philosophy, Political Science
Faculty Sponsor: Dr. Jeffrey Hause
2:55 pm | Harper 3029

“Am I My Brother's Keeper? Ancient Perspectives on Fraternal Correction”

Are you your brother’s keeper? Even if you are not, you have likely found yourself in a position where you felt compelled to correct a close friend or family member. In the field of ethics this action is referred to as fraternal correction. Where does this impulse come from, and how should you carry out this correction? While religious individuals may find their answer in scripture, how do we explain the universality of this impulse without an appeal to scripture? By examining how ancient thinkers like Socrates and Seneca approached the project of fraternal correction, this research attempts to provide insights into how we think about and perform fraternal correction.

About the Honors Program

Honors Program Mission Statement

Rooted in the university's Christian, Catholic, and Jesuit traditions, the Honors Program relies on the belief, articulated by Pope John Paul II, that "the united endeavor of intelligence and faith will enable people to come to the full measure of their humanity." Its goal is to foster a community committed to the ongoing education of students and faculty members as fellow seekers for truth. The program seeks individuals of all faiths and backgrounds who are intelligent, well prepared academically, highly motivated, and academically adventurous. The curriculum then immerses these students in an academically rigorous but flexible program of study guided by a faculty mentor who is charged with paying special attention to the personal dimension of learning. The program ultimately understands itself as a fellowship of inquiry whose individual members have dedicated themselves without reserve to love of learning.

The program is designed for talented, imaginative students desirous of participation in small, discussion-oriented classes and in courses on interdisciplinary and topical issues. It provides students with special opportunities and challenges to enhance their undergraduate experience and to contribute to the intellectual and cultural life of the University. The program also offers students the opportunity to pursue a course of study that complements their majors. Criteria for admission to the Honors Program include academic achievement and demonstrable interest in the program's aims and aspirations. Required application materials include an activities resume and two essays.

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Department of Fine & Performing Arts

Dr. Theodore Burk
Department of Biology

D'Antae Potter
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Dr. Michael Hawkins
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Dr. Jeffrey Hause
Department of Philosophy and Department of Fine and Performing Arts

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Department of Communication Studies

Dr. Erika Moreno
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In Memoriam

Dr. James ("Vic") Lupo
Associate Professor of Psychology

The Honors Program expresses our condolences to the friends, family, colleagues, and students of Dr. James "Vic" Lupo (Department of Psychological Science). Dr. Lupo passed away on March 27, 2018. Beloved of students and colleagues, Dr. Lupo taught at Creighton University since 1977. His charismatic personality, passion for teaching, high-spirited demeanor, and dedication toward helping students achieve their highest potential has left lasting impacts on everyone around him. He was a cornerstone of the Psychology Department, and will be missed by many.

Program by Lauren Richards and Dr. Erin Walcek Averett